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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/204,734	12/03/98	BOTTOMLEY	G 8194-205

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EXAMINER

FAN, C

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 07/18/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/204,734

Applicant(s)

BOTTOMLEY, GREGORY E.

Examiner

Chieh M Fan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 1998.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-27 and 29-33 is/are rejected.
- 7) ☒ Claim(s) 17 and 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 1998 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure s 2 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Specification

2. The disclosure is objected to because of the following informalities: "Multipliers 203a-302c" should be ---Multipliers 302a-302c---.

Appropriate correction is required.

3. On page 8, line 20, the applicant states "... base station signal, denoted x_T^x , where x indicates the base station signal." It is not clear which "x" is referred to since there are two x's. Further, " x_t^d ", " x_t^e " and " x_t^f " in Eq. (5) should be changed to " x_T^d ", " x_T^e " and " x_T^f ", respectively.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the detection statistics are obtained in both step of combining and the step of scaling, which makes it unclear how the detection statistics are obtained. It is suggested changing the limitation "so as to obtain detection statistics" to ---such that the step of combining obtains detection statistics---.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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7. Claims 1-5, 7-16, 18-27 and 29-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Bruckert et al. (US Patent 5,812,542).

Regarding claims 1, 10 and 23, Bruckert et al. ("Bruckert" hereinafter) discloses a method for processing spread spectrum signals from a plurality of traffic channels and a plurality of pilot channels and a plurality of pilot channels, comprising the steps of:

receiving data samples from the plurality of traffic channels and the plurality of pilot channels (see 108 and 148 in Fig. 1);

correlating the received data samples to spreading codes to produce pilot despread values and the traffic despread values (see 252 through 255 in Fig. 2);

forming scale factors corresponding to the relative strengths of the plurality of traffic channels and the plurality of pilot channels (see col. 9, line 65);

estimating channel response using the pilot despread values to produce channel coefficient estimates (see col. 3, lines 28-38);

combining the traffic despread values to obtain detection statistics that correspond to information symbols, using the channel coefficient estimates (see col. 3, lines 28-38; also see 130, 158 and 138 in Fig. 1; also see 263 in Fig. 2); and

scaling at least one of the traffic despread values, the channel estimates and the pilot despread values by the scale factors so as to obtain detection statistics that correspond to the relative strengths of the plurality of traffic channels and the plurality of pilot channels (see col. 9, lines 41-54, col. 10, lines 33-43; also see col. 11, lines 5-16).

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Regarding claims 3, 4, 14, 15, 25 and 26, see the mathematical expressions in col. 9, lines 42-53 and col. 10, lines 33-43). For example, the pilot signal P_1 is scaled by Y_{104} .

Regarding claims 5, 16 and 27, see col. 9, line 65 in Bruckert.

Regarding claims 7, 18 and 29, the plurality of traffic channels and the plurality of pilot channels correspond to a plurality of delays of a transmitted signal (see col. 3, lines 39-42, also see 166, 168, 170, 132, 134, 136 and 160, 162 and 164 in Fig. 1).

Regarding claims 8, 19 and 30, see col. 3, lines 25-28 and col. 4, lines 61-65 of Bruckert.

Regarding claims 9, 20 and 31, see the last line of col. 9 in Bruckert.

Regarding claims 10, 21 and 32, Bruckert discloses the steps of: receiving data samples from the plurality of traffic channels and the plurality of pilot channels (see 252, 253, 254 and 255 in Fig. 2); and obtaining from the received data samples detection statistics that correspond to information symbols while accounting for the relative strengths of the plurality of the plurality of traffic channels and the plurality of pilot channels (see 260 and 261 in Fig. 2 and see col. 9, line 65).

Regarding claims 11, 22 and 33, the step of obtaining comprises the step of performing RAKE combining while accounting for the relative strengths of the plurality of traffic channels and the plurality of pilot channels (see 130, 158 and 138 in Fig. 1, also see 262 and 263 in Fig. 2).

Claim Rejections - 35 USC § 103

8. Claims 2, 13 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruckert et al. as applied to claims 1, 10 and 23 above.

As described above, Bruckert teaches all the claimed invention except the step of scaling the traffic despread values. However, the multiplication of a scaled channel response with a traffic despread value is equivalent to the multiplication of a channel response with a scaled traffic despread value since the order of multiplying a scalar (a constant) may be interchangeable. Therefore, the step of scaling the channel coefficient estimates or the step of scaling the pilot despread values taught by Bruckert is considered functionally equivalent to the step of scaling the traffic despread values.

Allowable Subject Matter

9. Claims 6, 17 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bruckert et al. (US Patent 5,809,020), Bruckert et al. (US Patent 5,778,030), Ling et al. (US Patent 5,737,327), and Huang et al. (US Patent 6,009,089).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chieh M Fan whose telephone number is (703) 305-0198. The examiner can normally be reached on Monday-Friday 8:00AM-5:30PM, Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (703) 305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Chieh M Fan
Examiner
Art Unit 2634

cmf
July 12, 2001


STEPHEN CHIN
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